

## GEARTOOTH SPEED SENSOR

# GS1001–GS1002 Series



**Circuit-protected, Hall-effect geartooth speed sensor with adjustable stainless steel housing.**

### Features

- Senses motion of ferrous geartooth targets
- Near zero speed sensing capability
- Immune to rotational alignment
- 10 bit dynamic threshold detection offers
  - Automatically adjusting magnetic range
  - Self compensating to target geometry
  - Immune to target run out
- Compatible with unregulated power supply
- Reverse battery protected to -24VDC
- Internal circuit protection to IEC529 1000
  - EMI resistant to 10V/m, 30MHz to 1GHz
  - ESD resistant to 4kV (contact discharge)
  - Fast transient resistant to 2kV
- Conducted immunity resistant to 10VRMS@150kHz to 80MHz
- EMC compatible 30A/m@50Hz
- Meets IEC529 IP67 for dust and water protection
- Cable version: 22 AWG, tin plated with drain wire and polyolefin insulation
- Connector version: M12 integral connector meets IEC 60947-5-2 for low voltage devices
- Stainless steel housing

### Applications

- CNC machine tools
- Transmission speed
- Industrial feedback control

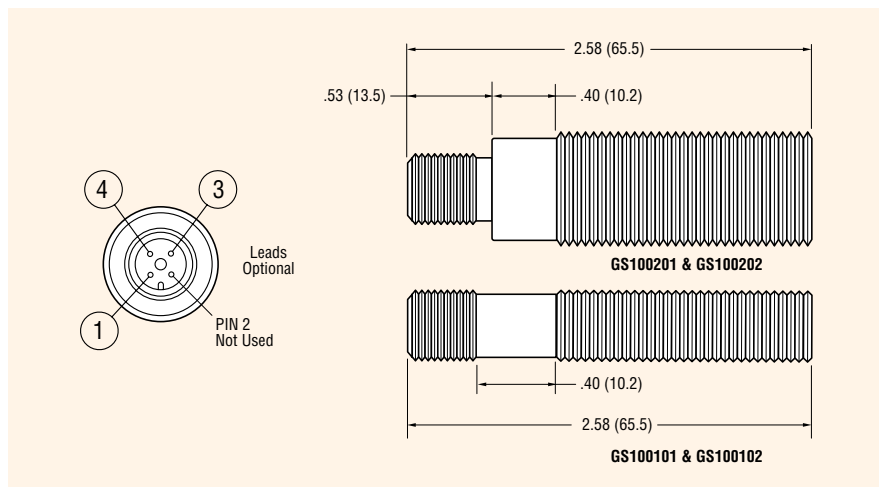
### Specifications

Part Number	Operating Voltage Range (VDC)	Supply Current (mA max.)	Output	Output Saturation Voltage (mV max.)	Output Current (mA max.)	Operating Temp Range (°C)	Storage Temp Range (°C)	Thread	Barrel Length	Cable	Connector
GS100101	4.5 – 24	6	sink	700	25	-40 to 105	-40 to 105	M12-1	65mm	—	12mm circular
GS100102	4.5 – 24	6	sink	700	25	-40 to 125	-40 to 125	M12-1	65mm	22 AWG x 1m BBB	—
GS100201	4.5 – 24	6	sink	700	25	-40 to 105	-40 to 105	M18-1	65mm	—	12mm circular
GS100202	4.5 – 24	6	sink	700	25	-40 to 125	-40 to 125	M18-1	65mm	22 AWG x 1m BBB	—

Notes: These sensors require the use of an external pull-up resistor, the value of which is dependent on the supply voltage. See page 18 for recommendations. Pull-up resistor should be connected between output (Black) and Vcc (Brown).

### Dimensions inches (mm)

All tolerances ±0.005 (0.13) unless otherwise noted.



### Open Collector Sinking Block Diagram

